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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 663,593	09 18 2000	Raymond Van Roijen	PHN 17,638	4051

7590 01/15/2002

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EXAMINER

DICKEY, THOMAS L

ART UNIT PAPER NUMBER

2826

DATE MAILED: 01/15/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/663,593

Applicant(s)

VAN ROIJEN ET AL

Examiner

Thomas L Dickey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 January 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☒ Claim(s) 6 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 18 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1, 5, 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. The preliminary amendment filed on 09/18/00 has been entered.

Oath/Declaration

2. The oath/declaration filed on 11/24/00 is acceptable.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

5. The Information Disclosure Statements filed on 09/18/00 and 1/22/01 has been considered.

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Specification

6. The title of the invention is not descriptive. A new title, such as "Protection Zone to Guard Corners of a Contact Zone Against Damage due to Kirk Effect Current," is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

Claim 4 is objected to because of the following informalities: To insure clarity and avoid the appearance of a lack of antecedent, the words "first buried layer" and "second buried layer" should be replaced by the language used to introduce these elements, namely, "buried layer of the first conductivity type" and "buried layer of the second conductivity type". Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by GALBIATI et al. (5,629,558).

Galbiati et al. discloses a semiconductor diode with bipolar/CMOS/DOMS technology comprising a semiconductor body 2 having a first region 3 of a first (n) conductivity type and, adjacent thereto, a second region 4 of the second (p), opposite,

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conductivity type, a third region 9 of the first (n) conductivity type, which is adjacent the second region 4 and separated from the first region 3 by the second region 4, and a fourth region 13 of the first (n) conductivity type which is separated from the second region 4 by the third region 9 and which has a higher doping concentration than the third region 9, the first, the second 4 and the fourth region 13 being provided with terminals A and K, where the third region 9 is provided with a protection zone 14 of the first (n) conductivity type having a higher doping concentration than the third region 9, which protection zone 14 is separated from the second region 4 by the third region 9 and is situated near the fourth region 13, and separated from said fourth region 13 by an intermediate, comparatively high-impedance region (part of region 9 on the surface of the device) where the third region 9 is formed by a surface region of the first (n) conductivity type adjoining a surface of the semiconductor body, the fourth region 13 and the protection zone 14 being provided as adjacent surface zones of the first (n) conductivity type, the third region 9 is bounded, at the side opposite the surface, by the second region 4 of the second (p) conductivity type, and the first region 3 of the first (n) conductivity type is formed by a region which, viewed from the surface, is situated below the second region 4 the third region 9 is formed by an island-shaped part 9 of an epitaxial layer (regions 9 and 10 form the epitaxial layer) which is provided on a substrate 2 of the second (p) conductivity type, said first region 3 and said second region 4 being formed by, respectively, a buried layer 3 of the first (n) conductivity type and a buried layer 4 of the second (p) conductivity type, said buried layers being

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arranged one above the other between the epitaxial layer and the substrate 2, the second buried layer 4 of the second (p) conductivity type isolating the epitaxial layer and the first buried layer 3 of the first (n) conductivity type from each other, and said second buried layer 4 being isolated from the substrate 2 of the second (p) conductivity type by the first buried layer 3 the island shaped part 9 of the first (n) conductivity type and the buried layer 4 of the second (p) conductivity type form a diode which serves as a circuit element in an integrated circuit, and the first region 3 and the second region 4 are provided with a common first terminal A, and the fourth region 13 is provided with a second terminal K. Note figures 1 and 2 of Galbiati et al. It is noted, but not considered relevant, that Galbiati et al. shows a terminal attached to protection zone 14, while the specification and drawings of the present application do not show a terminal attached to the protection zone. Claims 1-5 and 7, as submitted, contain no limitation that distinguishes the present invention from Galbiati et al.

Allowable Subject Matter

8. Claims 6 and 8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Papers related to this application may be submitted to Technology Center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax

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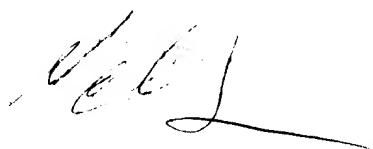
center located in Crystal Plaza 4, room 3-C23. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2826 Fax Center number is (703) 308-7722 and 308-7724. The Group 2800 Fax Center is to be used only for papers related to Group 2800 applications.

Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to Thomas Dickey whose telephone number is **(703) 308-0980**. The Examiner is in the Office generally between the hours of 8:00 AM to 5:00 PM (Eastern Standard Time) Monday through Friday.

Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center Receptionists** whose telephone number is **308-0956**.

TLD

01/2002

A handwritten signature in black ink, appearing to be 'TLD', with a long horizontal stroke extending to the right.